

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

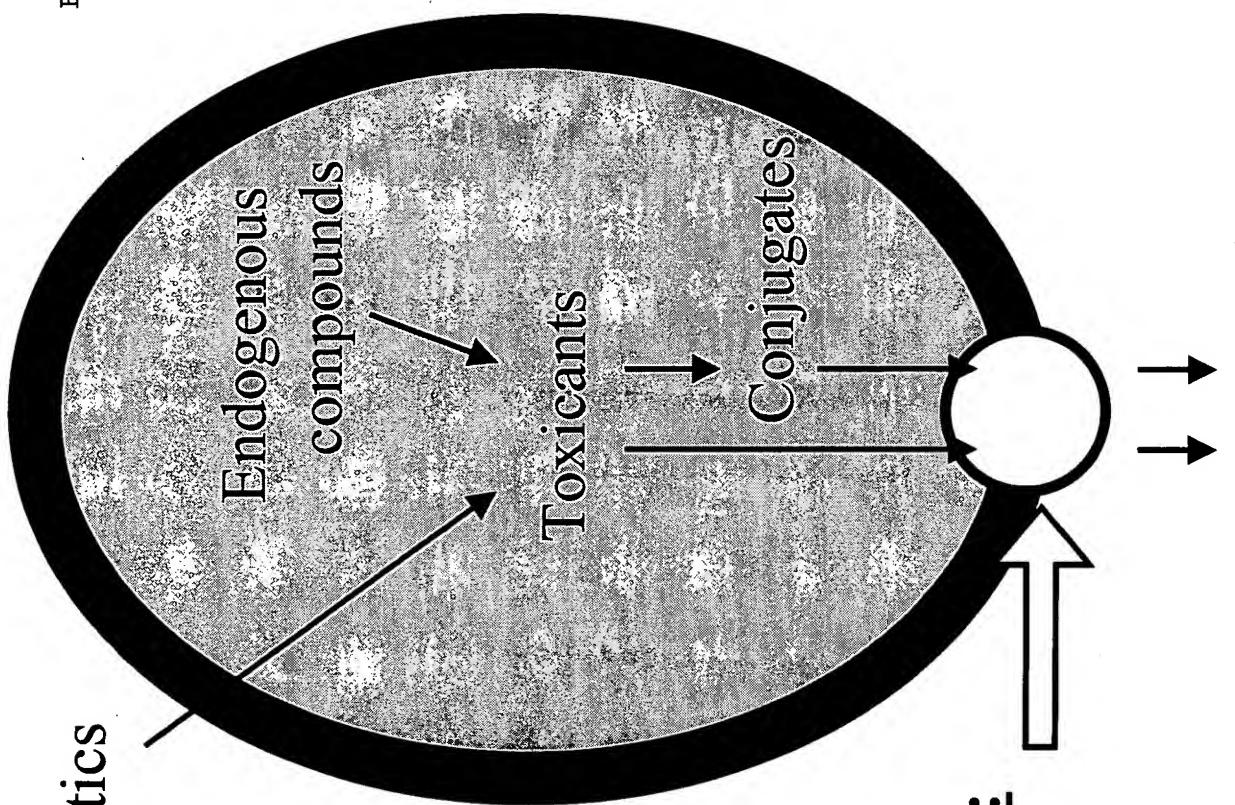
- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS ✓
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

Xenobiotics

Fig. 1



Transporters:
ABC proteins,
RLIP76;
Others?

RLIP76, A NOVEL TRANSPORTER OF XENOBIOTICS

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469 | 470 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 | 480 | 481 | 482 | 483 | 484 | 485 | 486 | 487 | 488 | 489 | 490 | 491 | 492 | 493 | 494 | 495 | 496 | 497 | 498 | 499 | 500 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

Fig. 2

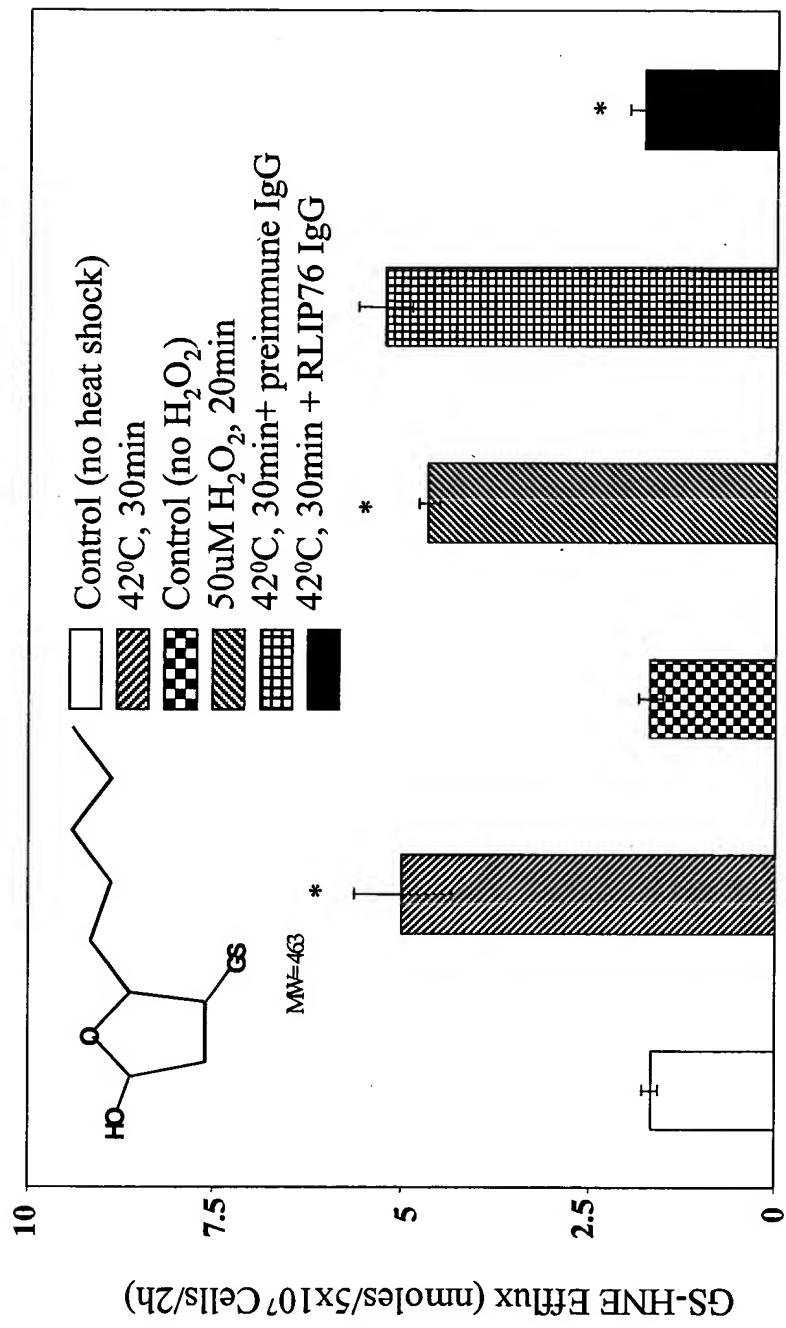


Fig. 3

Fig. 4B

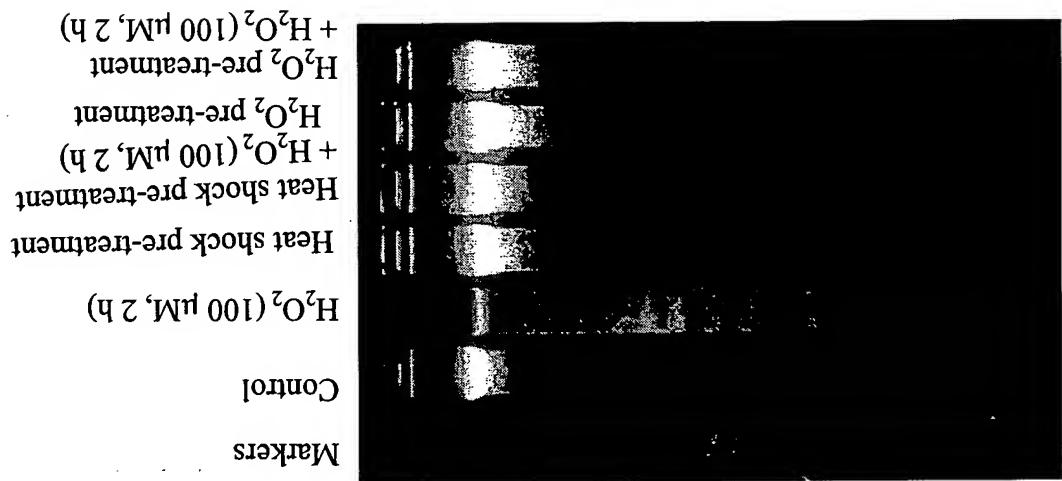


Fig. 4A

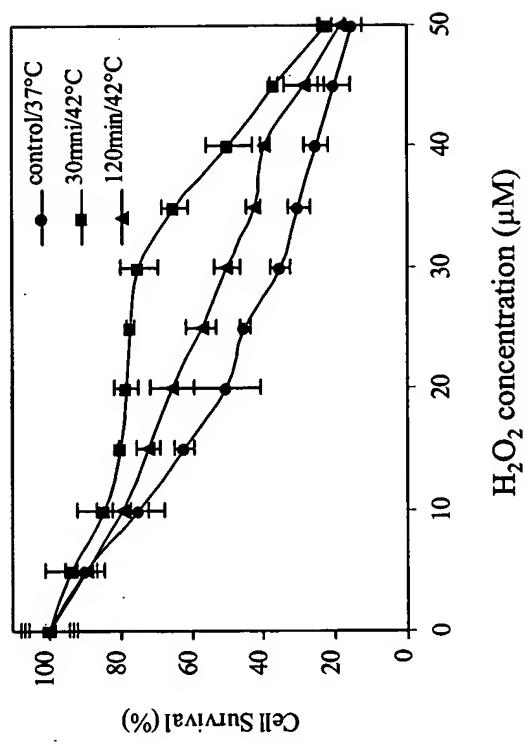


Fig. 5

RLIP76, A NOVEL TRANSPORTER OF XENOBIOTICS

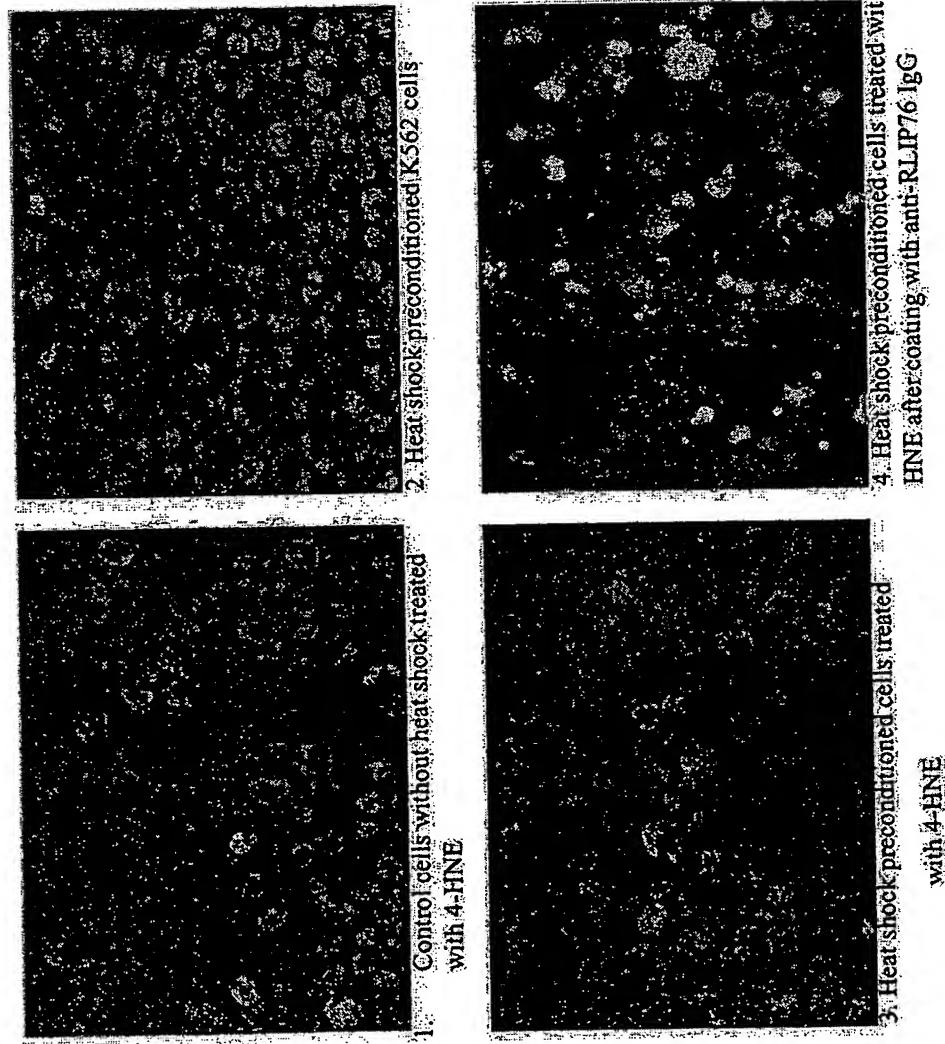
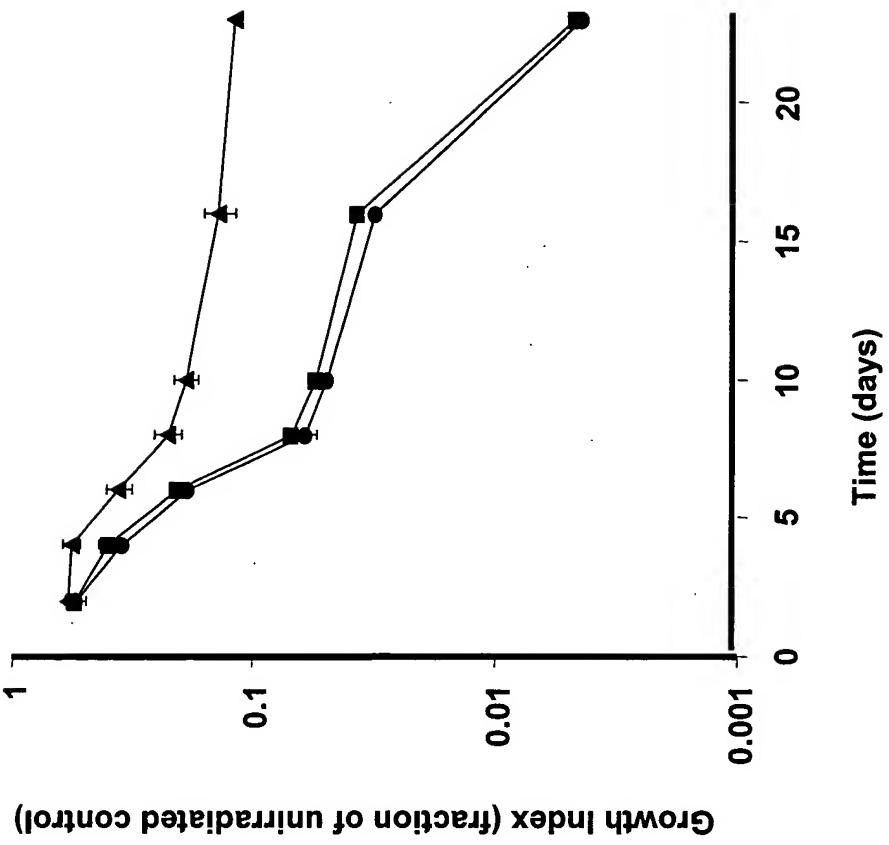
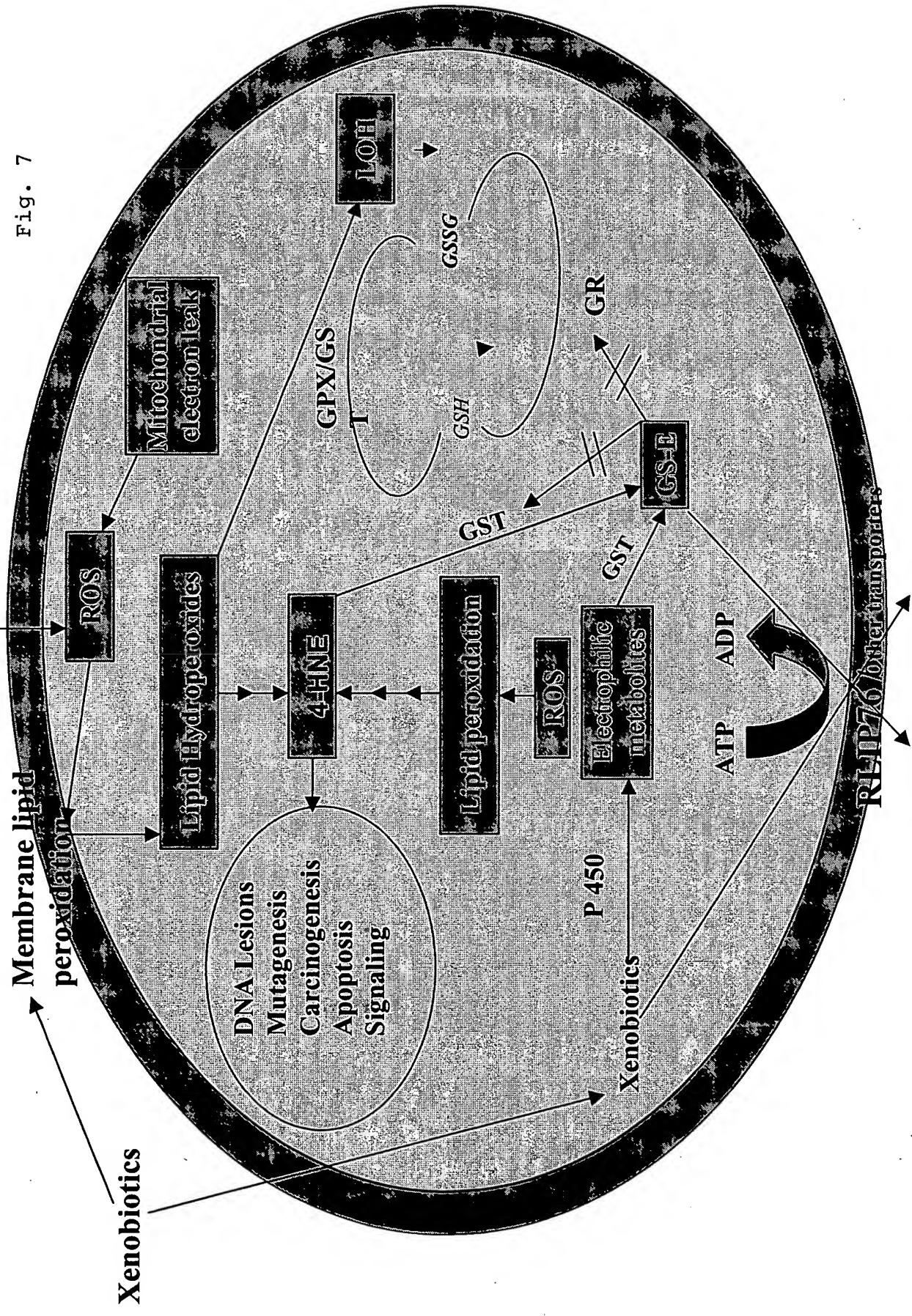


Fig. 6



Radiation (UV, X-ray), Metal ions

Fig. 7



8
Ei.
•

A. Sequence around the insertion site

5'TTTGTAAATTTCTATCTCTGCTCACCTGGCTTAACAGTTAACACTAGACCTGTTACAGTGCAGTT
AGAATGTCACATTAAAGTTGACTCTGCCTGOAGGGCTTGCTTAGGTA-insertion site-TGCTATTTCAGATGCTGGAAGCTGAGT-
GGAAAAAGTTGAGCTCAGTGGGGGAGGCCAATGAGAAGTTGCTTAGACTAAGGCCAGATAGGGAAAGGTAAAGTCAAAGAT
TAAGGCTGATGATTAAAGGAAAATCCAAAGGAGTCAAAGTGTGGGTTAAGTACACCTTAATGATGTTAGTAGGTTAAGAGGATTAAATTATGTA
ACAGTCAGTTAGGTAATAATTG 3'

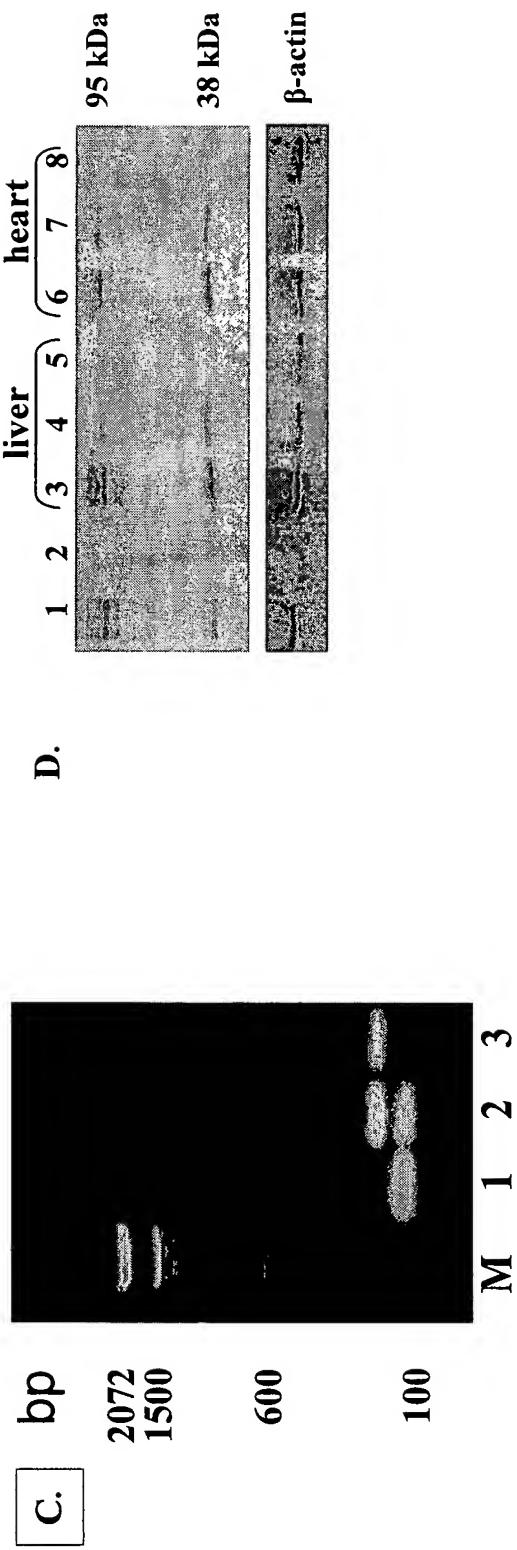


Fig. 9

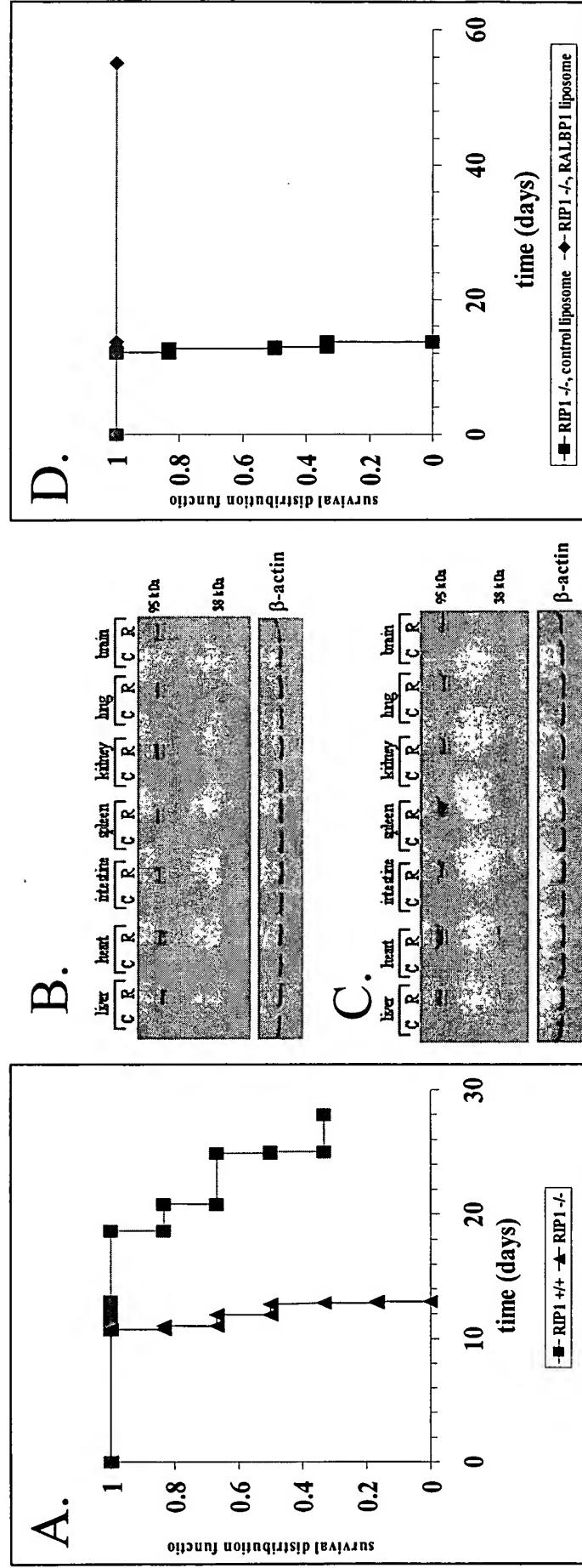


Fig. 10

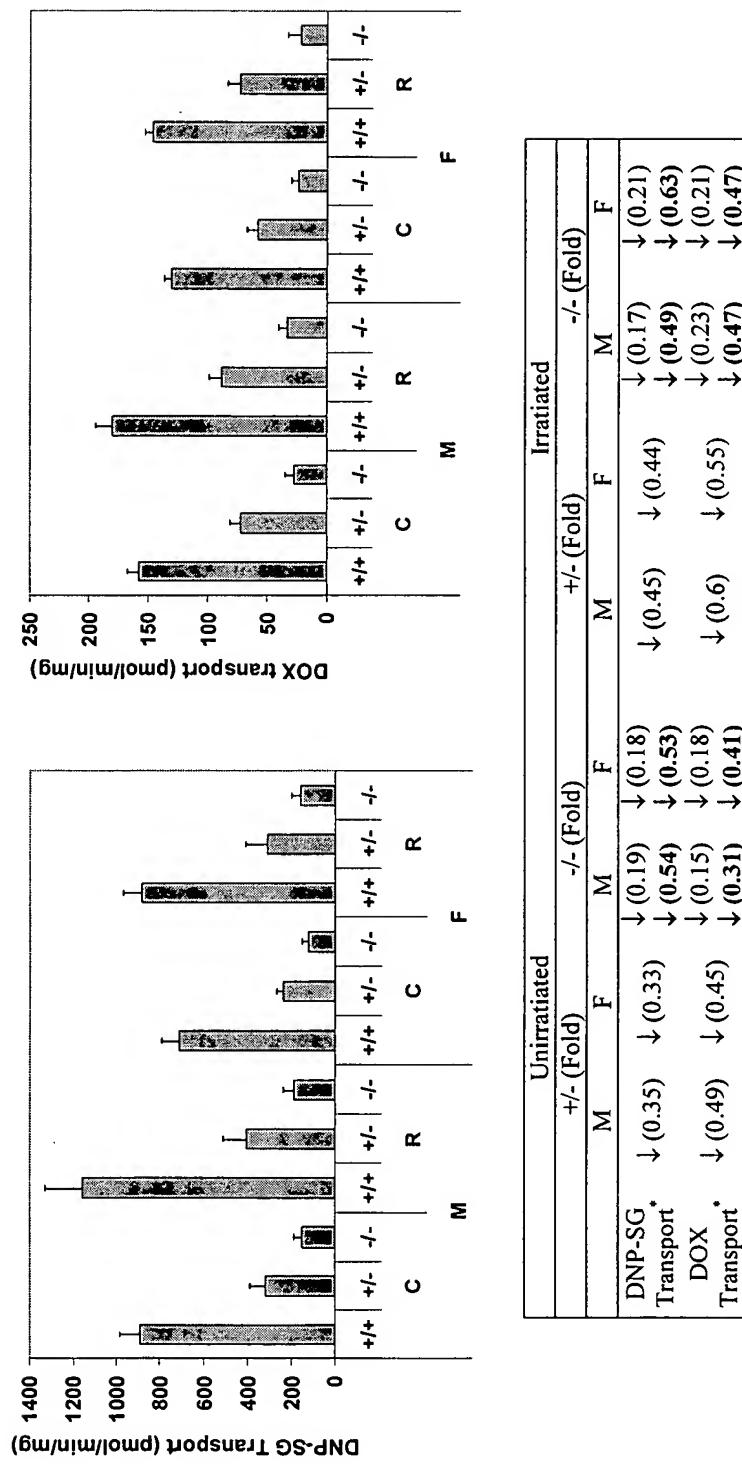


FIG. 11

| Organ | LOOH | | | | TBARS | | | | GSH | | | | GGCS | | | |
|------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | +/- | | -/- | | +/- | | -/- | | +/- | | -/- | | +/- | | -/- | |
| | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F |
| Liver | - | - | ↓(0.77) | - | ↓(0.79) | - | ↓(0.47) | ↓(0.63) | ↓(0.76) | ↓(0.86) | ↓(0.77) | ↓(0.86) | ↑(3.63) | - | ↑(5.25) | ↑(1.16) |
| Lung | ↑(1.32) | ↑(1.23) | ↑(1.62) | ↑(1.96) | ↑(1.23) | ↑(1.59) | - | ↓(0.60) | ↓(0.71) | ↑(1.19) | ↑(1.19) | ↑(1.07) | ↑(1.41) | - | - | ↑(1.45) |
| Kidney | ↑(1.20) | ↑(1.18) | ↑(1.43) | ↑(1.53) | ↑(1.19) | ↑(1.29) | - | - | - | - | - | ↑(1.19) | ↑(1.11) | ↓(0.65) | - | - |
| Heart | ↑(1.47) | ↑(1.75) | ↑(3.12) | ↑(2.56) | ↑(1.26) | - | - | ↑(1.06) | - | - | - | ↑(1.19) | - | ↓(0.55) | - | ↓(0.57) |
| Brain | - | ↑(1.16) | ↑(1.32) | ↑(1.28) | ↑(1.16) | ↑(1.46) | ↑(2.12) | ↑(1.54) | ↑(1.54) | ↑(1.93) | ↑(1.54) | ↑(1.55) | ↑(1.77) | ↑(1.69) | ↓(0.68) | ↓(0.88) |
| Intestine | ↑(1.56) | ↑(1.55) | ↑(2.13) | ↑(2.40) | ↑(1.60) | ↑(1.58) | ↑(1.60) | ↑(1.16) | ↑(1.61) | ↑(1.38) | ↑(1.26) | ↑(1.45) | ↑(1.31) | ↑(1.68) | ↑(1.41) | ↑(1.15) |
| Spleen | ↑(1.63) | ↑(1.52) | ↑(2.99) | ↑(3.39) | ↑(1.46) | ↑(1.47) | ↑(1.46) | ↑(1.47) | ↑(1.47) | ↑(2.54) | ↑(2.31) | - | ↑(2.61) | ↑(2.48) | ↑(2.91) | ↑(2.57) |
| | | | | | | | | | | | | ↑(1.91) | - | ↑(1.22) | ↑(1.22) | ↑(2.10) |
| GST | | | | | | | | | | | | | | | | |
| Liver | ↑(1.26) | ↑(1.09) | ↑(1.54) | ↑(1.46) | ↑(1.41) | ↑(1.42) | ↑(1.42) | ↑(1.60) | ↑(1.58) | - | - | ↓(0.86) | ↓(0.86) | ↓(0.60) | ↓(0.71) | ↓(0.74) |
| Lung | ↓(0.88) | - | - | - | ↓(0.90) | ↓(0.59) | ↓(0.75) | ↓(0.51) | ↓(0.76) | - | - | ↓(0.60) | ↓(0.60) | ↓(0.75) | ↓(0.86) | ↓(0.86) |
| Kidney | ↓(0.79) | ↓(0.77) | ↓(0.67) | ↓(0.86) | ↓(0.76) | ↓(0.73) | ↓(0.73) | ↓(0.62) | ↓(0.68) | ↓(0.66) | - | ↓(0.64) | - | ↓(0.57) | - | - |
| Heart | - | ↓(0.78) | - | ↓(0.64) | ↓(0.83) | ↓(0.31) | ↓(0.61) | ↓(0.07) | ↓(0.13) | ↓(0.22) | ↓(0.22) | ↓(0.76) | ↓(0.72) | ↓(0.70) | ↓(0.78) | ↓(0.62) |
| Brain | ↓(0.74) | ↓(0.78) | ↓(0.69) | ↓(0.63) | ↓(0.44) | ↓(0.81) | ↓(0.63) | ↓(0.44) | ↓(0.73) | ↓(0.24) | ↓(0.41) | ↓(0.60) | ↓(0.80) | ↓(0.52) | ↓(0.79) | ↓(0.67) |
| Intestine | ↓(0.78) | - | ↓(0.73) | ↓(0.78) | ↓(0.51) | ↓(0.65) | ↓(0.81) | ↓(0.87) | ↓(0.48) | ↓(0.36) | ↓(0.70) | ↓(0.15) | ↓(1.12) | - | ↑(1.12) | ↓(0.85) |
| Spleen | ↓(0.60) | ↓(0.63) | ↓(0.50) | ↓(0.62) | ↓(0.46) | ↓(0.63) | ↓(0.46) | ↓(0.63) | ↓(0.38) | ↓(0.49) | ↓(0.75) | ↓(0.78) | ↓(0.59) | ↓(0.67) | ↓(0.87) | ↓(0.81) |
| | | | | | | | | | | | | ↓(0.79) | - | ↓(0.55) | ↓(0.67) | ↓(0.72) |
| G6PD | | | | | | | | | | | | | | | | |
| Liver | ↑(1.54) | ↑(1.09) | ↑(1.54) | ↑(1.22) | ↑(1.35) | ↑(1.41) | ↑(1.42) | ↑(1.42) | ↑(1.60) | ↑(1.58) | - | ↓(0.86) | ↓(0.86) | ↓(0.60) | ↓(0.71) | ↓(0.74) |
| Lung | ↓(0.88) | - | - | - | ↓(0.90) | ↓(0.59) | ↓(0.75) | ↓(0.51) | ↓(0.76) | - | - | ↓(0.60) | ↓(0.60) | ↓(0.75) | ↓(0.86) | ↓(0.86) |
| Kidney | ↓(0.79) | ↓(0.77) | ↓(0.67) | ↓(0.86) | ↓(0.76) | ↓(0.73) | ↓(0.73) | ↓(0.62) | ↓(0.68) | ↓(0.66) | - | ↓(0.64) | - | ↓(0.57) | - | - |
| Heart | - | ↓(0.78) | - | ↓(0.64) | ↓(0.83) | ↓(0.31) | ↓(0.61) | ↓(0.07) | ↓(0.13) | ↓(0.22) | ↓(0.22) | ↓(0.76) | ↓(0.72) | ↓(0.70) | ↓(0.78) | ↓(0.62) |
| Brain | ↓(0.74) | ↓(0.78) | ↓(0.69) | ↓(0.63) | ↓(0.44) | ↓(0.81) | ↓(0.63) | ↓(0.44) | ↓(0.73) | ↓(0.24) | ↓(0.41) | ↓(0.60) | ↓(0.80) | ↓(0.52) | ↓(0.79) | ↓(0.67) |
| Intestine | ↓(0.78) | - | ↓(0.73) | ↓(0.78) | ↓(0.51) | ↓(0.65) | ↓(0.81) | ↓(0.87) | ↓(0.48) | ↓(0.36) | ↓(0.70) | ↓(0.15) | ↓(1.12) | - | ↑(1.12) | ↓(0.85) |
| Spleen | ↓(0.60) | ↓(0.63) | ↓(0.50) | ↓(0.62) | ↓(0.46) | ↓(0.63) | ↓(0.46) | ↓(0.63) | ↓(0.38) | ↓(0.49) | ↓(0.75) | ↓(0.78) | ↓(0.59) | ↓(0.67) | ↓(0.87) | ↓(0.81) |
| | | | | | | | | | | | | ↓(0.79) | - | ↓(0.55) | ↓(0.67) | ↓(0.72) |
| GR | | | | | | | | | | | | | | | | |
| Liver | ↑(1.26) | ↑(1.09) | ↑(1.54) | ↑(1.46) | ↑(1.35) | ↑(1.41) | ↑(1.42) | ↑(1.42) | ↑(1.60) | ↑(1.58) | - | ↓(0.86) | ↓(0.86) | ↓(0.60) | ↓(0.71) | ↓(0.74) |
| Lung | ↓(0.88) | - | - | - | ↓(0.90) | ↓(0.59) | ↓(0.75) | ↓(0.51) | ↓(0.76) | - | - | ↓(0.60) | ↓(0.60) | ↓(0.75) | ↓(0.86) | ↓(0.86) |
| Kidney | ↓(0.79) | ↓(0.77) | ↓(0.67) | ↓(0.86) | ↓(0.76) | ↓(0.73) | ↓(0.73) | ↓(0.62) | ↓(0.68) | ↓(0.66) | - | ↓(0.64) | - | ↓(0.57) | - | - |
| Heart | - | ↓(0.78) | - | ↓(0.64) | ↓(0.83) | ↓(0.31) | ↓(0.61) | ↓(0.07) | ↓(0.13) | ↓(0.22) | ↓(0.22) | ↓(0.76) | ↓(0.72) | ↓(0.70) | ↓(0.78) | ↓(0.62) |
| Brain | ↓(0.74) | ↓(0.78) | ↓(0.69) | ↓(0.63) | ↓(0.44) | ↓(0.81) | ↓(0.63) | ↓(0.44) | ↓(0.73) | ↓(0.24) | ↓(0.41) | ↓(0.60) | ↓(0.80) | ↓(0.52) | ↓(0.79) | ↓(0.67) |
| Intestine | ↓(0.78) | - | ↓(0.73) | ↓(0.78) | ↓(0.51) | ↓(0.65) | ↓(0.81) | ↓(0.87) | ↓(0.48) | ↓(0.36) | ↓(0.70) | ↓(0.15) | ↓(1.12) | - | ↑(1.12) | ↓(0.85) |
| Spleen | ↓(0.60) | ↓(0.63) | ↓(0.50) | ↓(0.62) | ↓(0.46) | ↓(0.63) | ↓(0.46) | ↓(0.63) | ↓(0.38) | ↓(0.49) | ↓(0.75) | ↓(0.78) | ↓(0.59) | ↓(0.67) | ↓(0.87) | ↓(0.81) |
| | | | | | | | | | | | | ↓(0.79) | - | ↓(0.55) | ↓(0.67) | ↓(0.72) |

FIG. 12

| Organ | LOOH | | | | TBARS | | | | GSH | | | | GGCS | | | | |
|------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | +/- | | -/- | | +/- | | -/- | | +/- | | -/- | | +/- | | -/- | | |
| | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | |
| Liver | - | ↑ (1.37) | - | ↑ (1.13) | - | - | ↓ (0.57) | ↓ (0.69) | - | - | - | - | ↑ (3.93) | - | ↑ (4.45) | ↑ (1.36) | |
| Lung | ↑ (1.43) | ↑ (1.30) | ↑ (1.67) | ↑ (2.10) | - | ↑ (1.28) | ↑ (1.25) | ↑ (1.35) | - | ↑ (1.07) | ↑ (1.38) | - | - | - | - | - | |
| Kidney | ↑ (1.44) | ↑ (1.27) | ↑ (1.27) | ↑ (1.71) | - | - | ↑ (1.28) | ↑ (1.39) | ↑ (1.14) | ↑ (1.11) | ↑ (1.34) | ↑ (1.24) | ↓ (0.84) | - | ↓ (0.72) | ↓ (0.85) | |
| Heart | ↑ (2.24) | ↑ (2.04) | ↑ (2.88) | ↑ (1.60) | ↑ (1.30) | ↑ (2.24) | ↑ (1.76) | ↑ (1.59) | ↑ (1.82) | ↑ (1.76) | ↑ (2.07) | ↑ (0.81) | ↓ (0.84) | ↓ (0.65) | ↓ (0.71) | - | |
| Brain | ↑ (1.25) | ↑ (1.30) | ↑ (2.28) | ↑ (1.64) | ↑ (1.47) | ↑ (1.40) | ↑ (1.29) | ↑ (1.78) | ↑ (1.53) | ↑ (1.78) | ↑ (1.14) | ↑ (1.17) | - | - | - | - | |
| Intestine | ↑ (1.80) | ↑ (1.93) | ↑ (2.46) | ↑ (1.69) | ↑ (1.80) | ↑ (2.48) | ↑ (1.96) | ↑ (1.96) | ↑ (2.93) | ↑ (2.49) | ↑ (3.02) | ↑ (2.79) | ↓ (0.83) | ↑ (1.30) | ↓ (0.71) | ↓ (0.77) | |
| Spleen | ↑ (2.07) | ↑ (2.16) | ↑ (3.44) | ↑ (1.57) | ↑ (2.10) | ↑ (1.53) | ↑ (1.97) | ↑ (1.78) | ↑ (2.86) | ↑ (2.69) | ↑ (1.96) | ↑ (1.83) | - | ↑ (0.61) | ↑ (1.40) | ↓ (0.46) | ↓ (0.79) |
| G6PD | | | | | | | | | | | | | | | | | |
| GST | GST | | | | GPX | | | | GR | | | | GR | | | | |
| Liver | ↑ (1.31) | ↑ (1.57) | ↑ (1.84) | ↑ (1.53) | ↑ (1.47) | ↑ (1.66) | ↑ (1.63) | ↑ (1.65) | ↑ (1.80) | ↑ (1.65) | ↑ (1.26) | - | ↓ (0.77) | ↓ (0.67) | ↓ (0.78) | - | |
| Lung | - | - | - | - | ↓ (0.68) | ↓ (0.80) | ↓ (0.55) | ↓ (0.73) | - | - | ↓ (0.61) | ↓ (0.71) | ↓ (0.84) | ↓ (0.77) | ↑ (1.17) | ↓ (0.44) | |
| Kidney | ↑ (1.83) | ↓ (0.86) | ↓ (0.77) | - | ↓ (0.85) | - | ↓ (0.93) | ↓ (0.76) | - | - | ↓ (0.67) | - | - | ↑ (1.23) | - | ↑ (1.19) | |
| Heart | ↓ (0.21) | ↓ (0.78) | - | ↓ (0.73) | ↓ (0.47) | ↓ (0.74) | ↓ (0.07) | ↓ (0.17) | ↓ (0.11) | ↓ (0.73) | ↓ (0.76) | ↓ (0.51) | - | ↑ (1.16) | ↓ (0.63) | ↑ (1.25) | |
| Brain | ↓ (0.24) | ↓ (0.80) | - | ↓ (0.70) | ↓ (0.59) | ↓ (0.72) | ↓ (0.30) | ↓ (0.45) | - | - | ↓ (0.58) | ↓ (0.67) | ↑ (1.47) | - | ↑ (2.01) | - | |
| Intestine | ↓ (0.38) | - | ↓ (0.67) | ↓ (0.86) | - | ↓ (0.59) | ↓ (0.73) | ↓ (0.37) | ↓ (0.54) | ↑ (1.20) | - | ↑ (1.09) | - | - | ↑ (1.22) | ↑ (1.18) | |
| Spleen | ↓ (0.84) | ↓ (0.69) | ↓ (0.55) | ↓ (0.73) | ↓ (0.52) | ↓ (0.63) | ↓ (0.40) | ↓ (0.53) | - | ↓ (0.73) | ↓ (0.75) | - | ↑ (1.39) | ↓ (0.23) | ↑ (1.20) | ↑ (1.25) | |
| | | | | - | | | | | | | | | ↓ (0.34) | ↓ (0.38) | - | - | |

FIG. 13

| | DNTR | DXTR | LOOH | TBARS | G6PD | GGCS | GPX | GR | GSH | GST |
|-----------|--------------|--------------|----------------|----------------|-----------------------|--------------|---------------|-----------------------|----------------|----------------|
| Organ | | | | | | | | | | |
| Brain | | | G, GD, R | GD, G-R | R, G-GD | R, G-GD | GD-R, G-GD | G-GD, G-R, GD-R | G, GD, R | G, GD |
| Heart | G-GD, G-R | G-GD, G-R | R, G-GD | G, GD, R | THR | THR | R, G-GD | THR | G-GD, G-R | G, GD, R |
| Intestine | | | GD, G-R | G, GD, R | GD, R | GD, G-R | G-GD, G-R | GD, G-R | G, GD, R | THR |
| Kidney | | | G-GD, G-R | G-R | GD, R | G-GD, G-R | GD-R, G-GD | G-GD, G-R | | R, G-GD |
| Liver | | | G, GD, R | GD, G-R | G, G-R | G-GD | R, G-GD | G, GD | G, GD, R | R, G-GD |
| Lung | | | R, G-GD | G, G-R | R, G-GD | | G-GD | G-GD, G-R | G, GD | G, GD |
| Spleen | | | GD-R, G-GD | G, GD, R | G-GD, G-R, GD-R | THR | G | G-GD, G-R | G, GD, R | G-GD, G-R |

G → Genotype main effect

GD → Gender main effect

R → Radiation main effect

G-GD → Genotype-Gender two way effect

G-R → Genotype-Radiation two way effect

GD-R → Gender-Radiation two way effect

THR → Three way effect (Gender-Genotype-Radiation)